



US Army Corps  
of Engineers®

# Engineer Update

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## Honduras asks Corps to continue work

Hurricane Mitch caused heavy damage to Tegucigalpa, the capital city of Honduras. From the beginning, the U.S. Army Corps of Engineers (USACE) has been involved with the recovery operations.

Under an agreement with the Republic of Honduras, USACE will provide technical services to clear the Choluteca River channel, remove damaged structures, and stabilize a massive landslide that blocks river navigation.

USACE will study the Choluteca River basin to determine options for landslide stabilization and associated restoration in and around the capital.

As part of the restoration project, USACE is providing engineering technical services for planning, design, contract award, and construction administration. Total cost of the project is \$206,000; the contract will be competitively bid.

In previous Hurricane Mitch recovery activities, USACE supported the

U.S. Army Southern Command (SOUTHCOM) and the U.S. Agency to International Development (USAID). For SOUTHCOM, USACE provided damage assessments, hydrologic surveys, emergency design for Joint Task Force Bravo, and road reconnaissance in Nicaragua.

In support of USAID, USACE prepared a preliminary damage assessment report for Honduras and other Central American nations, prepared a housing sector estimate and conducted bridge evaluations in Nicaragua. USACE also participated in interagency investigations teams in Honduras and Nicaragua.

USACE's preliminary estimate of the total cost for repairing Hurricane Mitch damage in Latin America is \$8.55 billion. This includes \$5.23 billion for public utilities, \$1.2 billion for transportation infrastructure, \$600 million for social infrastructure, and \$1.5 billion for housing and shelter.



Hurricane Mitch devastated large sections of Honduras. Under a new agreement, the U.S. Army Corps of Engineers will assist with repair operations. (Photo courtesy of Mobile District)

USACE has 20 years of construction experience in Central America. It maintains field offices at Soto Cono Air

Base in Honduras, and at San Salvador in El Salvador.

(Headquarters news release.)

## Army award recognizes 1998 safety record

A record low accident rate and a command-wide emphasis on safety helped the U.S. Army Corps of Engineers (USACE) earn the 1998 Chief of Staff of Army's Major Army Command (MACOM) Safety Award. USACE, one of only two commands to earn the 1998 award, has earned it three of the past four years.

The award recognizes the continued improvement of the USACE safety record in fiscal year 1998.

In FY98, there were no accidental federal employee fatalities during normal duty hours, and only 470 lost-time injuries and illnesses, compared to one fatality and 527 lost-time claims in FY97. The USACE rate for lost time accidents is 42 percent lower than the Army average.

USACE also showed improvement in contractor safety. There were two contractor fatalities and 217 contractor injuries, compared to eight fatalities and 227 injuries in FY97.

Accident rates were a historic low in FY98. The lost-time accident rate (or number of lost-time incidents per 100 workers) for federal employees fell five percent from 1.32 in FY97 to 1.25 in FY98. In the past four years the rate has been reduced 30 percent from 1.76. Similarly, the contractor lost workday accident rate fell three percent from fiscal 97 to 98, from 0.61 to 0.59, and 21 percent from .75 in the past four years.

"This is the first year in USACE history that no government employee died



A hard-hat, hearing protection, and safety glasses help keep this drill site operator safe at Elk Creek Dam in Portland District. (Photo by Bob Heims)

as a result of an on-the-job accident during normal business hours," said Connie DeWitte, Chief of the USACE Safety and Occupational Health Office. "Our employees and contractors are entitled to a safe and healthful workplace; even one death as a result of an accident is too many," she said.

In addition to the lower accident rate, USACE significantly lowered the cost of fraudulent accident compensation through an investigative unit developed by the Vicksburg (Miss.) District. Recent joint investigations by the Fraud Investigations Unit and the U.S. Department of Labor's Office of the In-

spector General, resulted in prison sentences for fraud offenders, probation, hours of community service, and fines and restitution of more than \$450,000. The investigations also saved taxpayers future costs and reduced annual charges by more than \$500,000.

"We've taken a total team approach to safety," said Vickie Siebert, Safety and Occupational Health Manager at Headquarters USACE. "We realize, as a MACOM, safety needs to be more horizontal than vertical, and we're pulling together the strengths of other directorates and staff offices to make this happen."

DeWitte said that Lt. Gen. Joe N. Ballard, USACE Commander and Chief of Engineers, is the command's safety officer. "His leadership in safety and health has definitely helped the program, she said. The Chief's Strategic Vision has given us direction and guidance resulting in a safer environment for our employees, contractors, and members of the public visiting USACE recreation projects."

Siebert pointed out the USACE safety program is responsible for not only USACE employees, but for thousands of contractors and millions of visitors to USACE recreation facilities.

Despite its success, the USACE safety record was not spotless in FY98, and Siebert says there are still areas that need improvement and total USACE team support.

"Our USACE Accident Prevention Plan for FY99 takes a common-sense approach and outlines three principles for safety success," said DeWitte. "First, commanders are the USACE safety officers and set the cultural tone for safety. Second, clear lines of responsibility and accountability for safety and health must be communicated. Finally, we use a team approach to conduct risk-based hazard analysis before performing the work at hand. If we embrace the FY99 Accident Prevention Plan and continue to focus on accident prevention, we will save lives and valuable resources."

(Headquarters news release.)



## Chaplain's Corner

# Stress counseling under development

Lt. Col. Tim Carlson  
Headquarters

For almost everything, there is a price. Even the brightest achievements often come at a cost.

Excellence is one of the U.S. Army Corps of Engineers' highest ideals. We read of projects that other agencies are struggling with, or emergencies or disasters that have flattened whole regions. Then, almost like the hero in an old western movie, the Corps lends its expertise and, *voila*, a job is well done!

But performing at such a pinnacle of excellence sometimes exacts a price from our workers. That price can be easily overlooked unless the leadership tunes in to the day-to-day performance of our workers, and is prepared to help them when the emotional bill is due.

A relatively new phenomenon in the corporate world is an awareness of work-related stress and the toll it can take on employees. People in the Corps sometimes experience traumas that other organizations rarely encounter.

Perhaps it's a park ranger searching for a drowning victim. Maybe it's an engineer in Puerto Rico or Honduras finding a storm fatality, or seeing a starving, sick person who will die in a short time. Or it could be a real estate worker burned out from dealing with the mud and minefields in Bosnia. Maybe it's an emergency response team living on the ragged edge while dealing with a flood or earthquake. Or it could be just people in an understaffed office working long hours and sacrificing their free time and family life to complete a critical project.

Can people continue optimal performance and stellar delivery of services after encountering highly stressful and tragic situations? The simple answer is *probably not*. Most care-givers and others involved in clean-up and intervention operations have a boil-over point. God designed us so that our performance mechanism eventually begins to slow down and demand some reflection and verbal depressurizing about the traumatic events we have been involved with.

The formal name for such dialogue and peer-to-peer support is Critical Incident Stress Management and Critical Incident Stress Debriefing. These tools for regaining personal equilibrium and retaining optimal performance capability in the workforce are fast

becoming essential components for managers and leaders throughout America.

In the past, many felt that helping workers in the aftermath of tragedy and trauma was just for the weak and the gentle-hearted. Those days are coming to an end. Too much research and data now indicate that persons in the workforce need to talk about their experiences with trained personnel within 72 hours after disasters involving traumatic events and death.

You might be wondering, "So what, Chaplain?" The "what" is in the formative stage at our Headquarters. It may be even further along in development at some of our districts. At Headquarters, we have established a Critical Incident Stress Management Team which includes Lt. Col. Rick Miller, the Provost Marshal; Frank Trent of the Safety Office; and myself, the Corps Chaplain. This group is taking Critical Incident Stress Management Training from the introductory through advanced levels. We will attend the World Congress in Baltimore later this month which focuses on this and other related



topics. This will enable us to better advise the Corps when matters pertaining to job-related stress and trauma arise.

What does the Critical Incident Stress Management Team hope to do for the Corps? First, we want to heighten our organization's awareness of the need for such training so the Corps can retain its performance edge. Second, we want to be information conduits to give the districts, and small groups like park rangers, information on training so that persons of each district or group can become trainers for their own people. Finally, we will be a corporate resource and repository of referral information.

Since our team cannot have day-to-day oversight, leaders and managers in the Corps must discern distress and abrupt changes in their subordinates'

job performance. When they realize that the changes originate from stress in the workplace, or from Corps relief operations outside the normal workplace, they may then choose to get in touch with the Critical Incident Stress Management Team for advice or help.

The positive impact of Critical Incident Stress Management and Critical Incident Debriefing is well known nationwide. We want to help you and work together to take care of our people during times of heightened stress and trauma so they can continue to deliver the best possible service to our customers, even during emergencies.

(Questions regarding this topic should be addressed to the Corps Chaplain, Attn: Ch (LTC) Tim Carlson, Room 7121C, 20 Massachusetts Avenue, Washington, D.C. 20314-1000, phone number (202) 761-0772.)

## Teamwork finishes drydock a week ahead of schedule



Welders work on the largest inland floating drydock north of New Orleans.

Article and Photo  
By Brenda Beasley  
Memphis District

It was a daunting task.

Curtis Pigram Jr., metalworker welder at Ensley Engineer Yard's Shops Unit in Memphis District, had just 60 days to repair the largest inland floating drydock north of New Orleans.

The drydock is a vital element of Mississippi River Division's physical infrastructure, serving a variety of customers and helping ensure continued navigation on America's largest inland waterway. The repairs were needed to increase the drydock's strength and ensure its viability for the future.

As temporary Plate Shop Leaderman, Pigram and his team completed the work one week ahead of schedule, in plenty of time for the annual inspections of the dredge *Hurley*

and the motor vessel *Mississippi*.

"I took it as a personal challenge to get this job done by March 1," Pigram said.

He turned to the resources at hand. After getting the go-ahead from Ensley's chief, Pigram coordinated available workers from the *Hurley*, the Carpenter Shop, the Electrical Shop, the Pipe Shop, the Warehouse, the Yards and Docks Unit, and Bank Protection Party No. 11.

These workers performed the excess work, such as painting, priming, and metal handling. "Thirty-two different guys worked on this project, with as many as 20 at one time," said Pigram. "They allowed the welders to concentrate on welding, and fitting the angle iron to the dock."

A floating drydock is a huge open-ended steel box that can be partially flooded to allow a ship to enter. The drydock is then drained and raised, lifting the contained vessel free of the

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# New contract continues Bosnia support

Article and Photo  
By Joan Kibler  
Transatlantic Programs Center

U.S. Army Europe (USAEUR) and the Transatlantic Programs Center (TAC) have joined forces to award a contract to provide continued logistics services to U.S. forces deployed in the Balkans region.

On Feb. 19, TAC awarded the Operation Joint Forge sustainment services contract to Brown & Root Services of Houston, Texas. The contract becomes effective May 30 and is a continuation of the sustainment services currently required by USAREUR, which is responsible for military operations in the Balkans.

"This contract is an extension of the Army's policy to use contractors on the battlefield," said Col. Jim Wright, Assistant Deputy Chief of Staff for Logistics, USAREUR. "Sixty percent of the logistics services being performed in Bosnia fall under the sustainment services contract."

"When the U.S. committed to the NATO peacekeeping operation, we initially had about 18,000 troops in Bosnia," Wright said. "Today, we're at 6,200. Contracting these types of services enables our soldiers and airmen to focus on their peacekeeping mission while their day-to-day needs are being met."

Under the contract, Brown & Root Services will provide life support and transportation and maintenance services for U.S. forces deployed to Hungary, Croatia, and Bosnia.

"This work is not glamorous or complex engineering work, but it's truly significant," said Col. Tim Wynn, TAC commander. "It touches the lives of thousands of soldiers and airmen every day. It provides our troops with their sleeping quarters, feeds them, washes their clothes, delivers their mail, cleans their showers and latrines, and provides electricity."

Along with these basic life support needs, the contract provides a host of transportation and maintenance ser-



These buildings, with air conditioners and wooden sidewalks, replace tent cities and make life more pleasant for soldiers stationed in Bosnia.

vices, such as road repair, snow and ice removal, hazardous materials and environmental services, cargo handling, equipment maintenance, and staging and redeployment operations.

Wynn said there is a significant aspect of this logistics contract that cannot be overlooked. "Our military is becoming extended as it supports U.S. operations all over the globe. It is absolutely critical that we, the Corps, continue to demonstrate ways to help the Army extend its utilization as it supports these operations."

While the new contract is for a one-year period, it has four one-year option periods that can be awarded as needed by the government. The cost of services is estimated at \$180 million per year, or \$900 million if the base year

and all option periods are awarded.

"This is a cost reimbursement contract that allows the government to issue task orders to meet the customer's requirements," said Robert Gruber, TAC contracting officer for the sustainment services contract. "This indefinite delivery, indefinite quantity contract is used when the government can't specify a firm quantity of services because of changing mission requirements, which has certainly been the case in the Balkans."

The continued U.S. involvement in the Balkans prompted this new competitively awarded contract.

Alan Moses, program manager for the Office of the Deputy Chief of Staff for Logistics, USAREUR, said that the success of these contracting actions is the result of the dedicated teamwork of many individuals and organizations committed to serving American forces in the theater.

"Under the team approach, there has been remarkable performance," Moses said. "TAC has always kept its eye on the mission, on the fact that all our efforts were being done for our soldiers, sailors, airmen and marines who were placed in harm's way in the region."

TAC uses an integrated project team (IPT) approach, with customers and stakeholders participating as full-fledged team members in accomplish-

ing the work.

"Because of these efforts, today in Bosnia, you'll find wooden communities and all the services that sustain our troops," Moses said. "TAC has made a nonstandard system work in a contingency scenario. This flexible contracting instrument allows us to adjust to changing missions, almost as simply as making a telephone call."

Wynn said that TAC is indeed "proud of the confidence placed in us by our customer. USAREUR had a choice in their service provider for this new contract. That organization chose TAC to award and administer this new contract, and TAC is determined to meet this challenge by providing top quality service."

"Our partners in providing this top-quality service are the members of the Defense Contract Management District-International," Wynn said. DCMD-I provides day-to-day contract administration, quality control and property accountability. They work directly with the TAC contracting officer to ensure the contract's terms and conditions are met.

The DCMD-I teams generally have about two dozen civilian and military specialists.

Randy Harl, president of Brown & Root Services, said that his company is particularly pleased at winning this contract. "We don't manufacture a product," Harl said. "Our product is a service. We plan to continue to provide complete and cost effective service for this critical mission."

TAC has been administering a logistics services contract for USAREUR since December 1995 when U.S. forces

first deployed to the Balkans to support the NATO-led Implementation Force. From December 1995 through May 1997, the services were provided by Brown & Root Services under a contract awarded by TAC to support the

*"It touches the lives of thousands of soldiers and airmen every day."*

Army's Logistics Civil Augmentation Program (LOGCAP), which provides contracted logistics services during military contingency operations.

In May 1997, as a result of the continuing U.S. commitment to the peacekeeping operations, USAREUR asked TAC to award a follow-on sustainment services contract to Brown & Root Services, which expires this May.

"Through LOGCAP and the follow-on sustainment services contract, almost \$1 billion has been spent on contractor actions to support the life, health, and safety of forces there," Gruber said.

"Brown & Root's performance in providing these services to our soldiers is the model for how the Army ought to do sustainment services in the future," Wright said.

## Drydock

Continued from previous page

water with all parts of its hull accessible for inspections, repairs, painting, and so on.

Ensley's floating drydock is 320 feet long and 105 feet wide, with a weight-bearing capacity of 3,963 tons. Its 16 pumps remove 35,200 gallons of water per minute to raise the drydock and the vessel it holds. Two people operate the entire drydock from a single control room. They came in an hour early each day to level the drydock so the workers could begin the day's work.

The major repairs called for welding three 270-foot-long sections of one-inch thick angle iron along the upper edges of the inside and outside walls, according to Terry Phifer, maintenance

mechanic supervisor in the Shops Unit. Two more three-eighths-inch thick sections were installed below them. The five rows of reinforcing angle iron, spaced about two feet apart along the upper portion of the inside and outside walls, give the drydock the additional strength it needs.

"This was an extraordinary team effort on the part of our workforce," said Ricky Shoaf, chief of the Shops Unit at Ensley Engineer Yard. "The Welding Shop provided their usual professional results, and their support group enabled us to finish this important, visible project a week ahead of our deadline. Now the drydock season (March to November) can begin on schedule in order to serve our customers."





As part of the asbestos removal process at Fort Sill, a negative air machine (left) kept the pressure in the house slightly lower than that of the surrounding area. If the poly sheeting closing the house tore, air would flow in rather than out, keeping asbestos inside. To check on the system's integrity, workers took samples at both the intake and exhaust of the negative air machine. (Photos courtesy of Tulsa District.)

## Project tests methods, assumptions

**Burl Ragland**  
Tulsa District

Asbestos, once widely used as insulation, is a wicked contaminant, causing everything from simple itching to lung cancer. Although asbestos is no longer used as a building material, it is still a hazard. Whenever it is found in old buildings, special precautions must be taken to remove and dispose of it without endangering workers or the environment. This adds significantly to a project's cost and time.

However, a recent demonstration project by Tulsa District and its partners proved that not all forms of asbestos are dangerous.

A Family Housing Project at Fort Sill, Okla., will upgrade 328 family housing units for the soldiers. It was a win-win for the soldier, Fort Sill's Director for Public Works (DPW), and Tulsa District's Fort Sill Team, who would develop the project plans and specifications.

But there was a problem. Strips of sheet rock in the houses' walls had to be removed to replace electrical wiring. The walls had a thin layer of sizing material which contained asbestos (a "speckle layer"). A previous housing project had the same material, and the cost of removing the sheet rock was about \$500,000 for 60 units.

The cost of removing the asbestos was not part of the upgrade project's programmed cost. Tulsa District and the Fort Sill Team faced the challenge of getting the best product for the soldier and still staying within the budget.

Fortunately, Tulsa District has successfully developed and carried out demonstration projects dealing with asbestos. They worked closely with the Environmental Protection Agency (EPA) on several projects dealing with non-friable (not powdery) asbestos. Those efforts led EPA and state regulators to make numerous rule changes for removing non-friable asbestos.

The housing upgrade project at Fort Sill seemed like another chance to determine if there is a way to deal with asbestos that is better for the workers, the environment, and the budget.

Ron Barnett, Fort Sill's Director of Environmental Quality (DEQ); Ed Theissen, Chief of Fort Sill's Housing Division; and Burl Ragland, Tulsa District Project Manager, met to develop a plan for a demonstration project.

Fort Sill's DEQ would provide the asbestos workers, prepare the rooms, and take the samples; its DPW Housing Division would coordinate the project with the residents and provide the houses, plus repair the walls once the testing was complete. The Corps would pay for the sample analysis, develop the protocol, coordinate with all the state and federal regulators, and develop the final report.

Ragland had the lead for the asbestos removal demonstration project. The initial protocol was a Fort Sill effort, but the final protocol was a cooperative effort between EPA's Susan Sepata and Ragland. EPA approved the document. The protocol provided a detailed plan to determine if a danger to workers or the environment would result when removing the sheet rock and asbestos material using standard construction practices.

Houses were tested as they became vacant. If the house tested positive for asbestos in the sizing material, then the house would remain vacant and be used for the project.

A typical test involved several steps. During testing, the house was treated as an asbestos removal operation, with full sampling of the area, the affiliated areas, and personnel. Each area had all non-affected walls, ceiling, and floor sealed with poly sheeting, and poly sheeting over the doors and windows allowed a negative pressure area to be established. Negative air machines (special fans with filters) were used to keep the air pressure inside the house slightly lower than outside. If the poly sheeting tore, air would flow in rather than out, keeping asbestos inside.

Monitoring devices were placed both inside and outside the confined space, and on the worker. Doug Brown performed the actual removal, and Jackie Myers took the samples and monitored the site. On site, Rick Smith and Ragland performed quality control monitoring.

To simulate the worst situation, six-inch sections of wall were sawed out and removed. This operation was repeated until two walls had the sheet rock removed. This removal work at each house was completed in a single eight-hour workday.

Unfortunately, the continuous cutting of sheet rock created a high level of dust which clogged many of the samples. So the number of test houses had to be increased from nine to 14 to obtain the 95 percent confidence level for the testing program.



Tulsa District used a housing upgrade project at Fort Sill as a demonstration project for a better means of removing asbestos. (Photo courtesy of Tulsa District.)

Finally, the results were in. The findings from all 14 family housing units indicated there is no danger from asbestos to the environment, to the worker, or to the public if the sizing material on the sheet rock were handled by standard demolition practices. The report substantiates the hypothesis that the speckle layer does not represent a hazard to the worker.

The report went to the state regulators, EPA, and OSHA. Based on the report, the federal OSHA Office in Oklahoma City granted a Negative Exposure Assessment for workers for this project. This saved an estimated \$950,000 for the project.

More importantly, this research indicates that the requirement to treat asbestos-containing sizing material as if it were friable asbestos should be questioned. This could impact future projects where this material was used on sheet rock walls.

(Burl Ragland is a professional engineer in the Programs and Project Management Division of Tulsa District.)





# Satisfy the Customer

Significantly reengineer business processes and leverage leading edge technology to optimize effectiveness from our customers' perspective.

## Revetment protects marsh wildlife

By Frank Balon  
Buffalo District

A diverse, highly productive coastal wetland at Hamlin Beach State Park in Monroe County, N.Y., has been preserved by Buffalo District's Regulatory Branch and Coastal/Geotechnical Engineering Section. They preserved Yanty Marsh by building a low-profile rock riprap revetment structure.

Yanty Marsh is home to a variety of aquatic life, such as fish, amphibians, reptiles, and waterfowl. Marsh vegetation is also diverse, and forms distinct zones depending on variables like water depth and velocity.

A natural barrier beach separates Yanty Marsh from Lake Ontario. The beach had protected the marsh from wave attacks, but high water levels from man-made projects, combined with natural processes, caused erosion. In the past year, the barrier beach had breached in three areas between the lake and the marsh, threatening to change the Yanty marsh ecosystem.

"In only a two to three week period, I witnessed the beach erode about 40 feet," said Gary McDannell, biologist and team leader in Regulatory Branch.

The district's involvement with Yanty Marsh began in 1995, when representatives from Hamlin Beach State Park requested technical assistance from the district.

The district deemed Yanty Marsh worthy of preservation and, shortly afterward, Michael Mohr, a civil engineer in Coastal/Geotechnical Engineering Section, began to work with the New York State Office of Parks to develop a plan to protect the marsh.

Three designs were considered. The first involved protecting the marsh by building a revetment along the existing shoreline. The was rejected because during high wave periods, water would overtop the rock, causing accelerated erosion behind the structure.

The second concept involved creating a gravel beach to mimic the natural barrier beach. This was dismissed because it would require periodic nourishment of the artificial beach and would consume too much of the nearshore habitat.

The third alternative involved erecting a low revetment about 35 feet into the lake. The concept was chosen because it would be less intrusive on shoreline vegetation, and easier to build and maintain. Mohr designed the project to blend into the environment.

One state agency resisted. Its staff objected to using public funds to protect the marsh and felt that nature should be allowed to take its course. Despite efforts by Hamlin and the Corps



Machinery moves rocks into place as the revetment is built. Wave damage is visible in the foreground.

to demonstrate the marsh's value as a natural resource, the opposition created an impasse. As the stalemate continued, the beach eroded further.

Hamlin representatives joined with Buffalo District, the New York State Department of Environmental Conservation, the New York State Office of Parks, politicians, and local citizens to obtain the necessary approvals to proceed. Led by Paul Leuchner, chief of the Regulatory Branch, and McDannell, the consortium approached New York State Governor George Pataki's office to negotiate an end to the impasse.

"This partnership, united in a common cause, was pivotal to the future existence of Yanty Marsh," said Leuchner. "Were it not for their relentless efforts, no one would have paid attention to this issue." They were successful and, on Dec. 2, 1997 the project was approved.

While awaiting approval, two local corporations stepped forward with funding for the Yanty Marsh project. Wegmans Supermarkets and Lyndon Tech Park were required to perform wetland restoration to mitigate natural resource consumption during their own construction projects. The regulatory staff determined that such mitigation could not be done on their lands, which required them to pursue offsite mitigation. The companies considered several projects to fulfill their obligation, and selected Yanty Marsh as their best alternative. However, their funds were insufficient to meet the full cost of the project.

In spring of 1998, the New York State Department of Transportation (NYSDOT) offered to fund and build the project since they, too, needed a mitigation project. NYSDOT agreed to supply all labor and materials for the marsh project, while the funds from Wegmans and Lyndon Tech Park



The new revetment protects the marsh and enhances its appearance. The temporary road will be replaced with a natural-looking stone covering.

would go to develop a plan to enhance the marsh for educational purposes.

A plan to have the State University of New York at Brockport prepare guidance on the best alternatives for managing the marsh for educational objectives is currently under consideration.

Among Yanty Marsh's features is the Yanty Creek Nature Trail. As an educational tool, the nature trail has several exceptional attributes, including Yanty Marsh, an old field, a coniferous woodlot, a shrub-field, a small farm pond and a deciduous woodlot. The trail, established by the local Lions Club, is one of the few in the region with an interpretive trail for the blind.

Work on the Yanty Marsh project began in September 1998 and, even before the revetment was completed, waves were depositing sand and gravel on the water side of the structure, enhancing its protection. Since about mid-November, additional material has

gathered along the barrier beach, replacing some of the lost habitat around the marsh perimeter.

Buffalo District's regulatory staff and Councilman Ed Evans of Hamlin are organizing a work party to plant willow-wattles along about 1,000 feet of the barrier beach. Volunteers from federal, state, and local agencies, plus school children, Boy Scout troops, and private citizens will plant the wattles this month. The willows will further stabilize the fragile beach.

"This is an outstanding way to get the community involved in environmental stewardship," said McDannell.

"For many years, Yanty Marsh has been on Mother Nature's death row," said Evans. "Thanks to the efforts of the Corps and many state agencies and concerned citizens, Yanty Marsh has been granted a reprieve."

(Ed Evans, a councilman in the town of Hamlin, took the photos)





The Auto Skills Development Center was completed last August at a cost of \$3.6 million. The building has 42 bays and is longer than a football field.

# Savannah District manages quarter-billion in projects at Fort Benning

Article by Verdelle Lambert  
Photos by Jonas Jordan

When the customer speaks, Savannah District listens. Probably nowhere have those listening skills been better honed than at Fort Benning, Ga., where the district manages around a quarter of a billion dollars in design and construction projects and other services for the Directorate of Public Works (DPW).

"I'm hard pressed to say what could be done better," said Col. Randy Buck, the DPW. "I think communication between Savannah District and the DPW is outstanding. If I call with a question or problem,

I get a positive response pretty quick."

Buck has been the DPW for more than two years and knows the business from both sides. Buck worked with the Corps' resident office at Fort Irwin, Calif., on the staff of the Civil Works Directorate at Headquarters, and commanded Detroit District before becoming the DPW.

"Sure, there are little things we still tussle with,"

said Buck. "We have warranty difficulties and sometimes the turnover of facilities is not as smooth as it might be. But any time something like that crops up, the communication kicks in and we sort things out. That's why I don't worry about the small stuff. I'm concerned about the big picture."

## Big picture

The big picture is pretty big. Fort Benning occupies 182,000 acres and has an active duty population of almost 35,000. Major units include the U.S. Army Infantry Training Brigade, the Infantry School, Ranger Training Brigade, Airborne School, and the School of the Americas. There are also combat units

like the 3rd/75th Ranger Regiment, 3rd/3rd Infantry Division, and the 36th Engineer Group.

"What this means is that Fort Benning is busy," said Buck. "We have a lot of acreage and buildings. We have more than 4,000 family housing units, one of the largest inventories in the Army. At the same time, we have to operate more efficiently with a much smaller budget and workforce. From my viewpoint, it becomes more and more important to work with Savannah District because the district has a wealth of abilities we simply don't have."

## Many projects

The Corps has a tremendous impact on Fort Benning, both in quality-of-life projects and mission projects that support the installation as a training center and power projection platform. The district recently completed a \$4.9 million simulation center where soldiers "operate" armored vehicles. The district is currently building a new railhead which represents a quantum leap in rail movement capability.

Other key projects include Kelley Hill I & II barracks for the infantry division, and barracks and other facilities for the rangers. Later this year and in 2000, the district will begin building the second set of barracks for the 36th Engineer Group, and Phase III of the Kelley Hill Barracks.

Also high on the district's radar screen are projects for the Basic Training Brigade (BTB), a new unit at Benning that will require new and renovated facilities by early summer.

"We've worked at a feverish pace to support the standup requirements," said Senior Project Manager Nate Stone, who serves as the district's installation manager for the Fort Benning team. "For flexibility, most of the BTB design work was done in-house."

"We've given the district whiplash on the design effort," admits Buck. "We've told them, 'Head in this direction' one week, and two weeks later we tell them to go in a totally different direction. And the district's design staff has rolled with the punches really well.

I have nothing but admiration for them."

## IDIQ

Brown & Root, Fort Benning's job order contractor, will do much of the construction work for the Basic Training Brigade. The Corps is managing the larger jobs. A couple of short-fuse projects are being handled under Huntsville District's IDIQ (Indefinite Delivery Indefinite Quantity) contract, and the district awarded its own small business IDIQ in early February to support work at Benning.

"The installation is shifting our designs to available IDIQ contracts where they can be implemented immediately," said Stone. "The customer doesn't have to wait for a construction contract to be awarded. The 'One Door To The Corps' policy allows Fort Benning to seek assistance not only from Savannah District but also from other districts and engineering support centers."

Buck saw the value of IDIQ firsthand when a 200-person classroom had to be rewired in 30 days.

"Huntsville said they could do it but, frankly, my reaction was, 'I gotta see this to believe it,'" said Buck. Huntsville did the job in 29 days.

Now that the district has its own IDIQ, Buck has only to walk 100 feet down the hall rather than drive four hours to Huntsville.

## Proximity

In fact, proximity has been key in strengthening the relationship between the DPW and the district.

"We have an excellent relationship," said Buck. "I've been here about two-and-a-half years, and it was that way for some time prior. I'd like to think it's become stronger during my tour."

About 18 months ago, Buck co-located the district's area office to the same building and floor as the DPW. "Now, instead of calling or taking time to drive over to their office, I can walk down the hall and talk to Harold Hartman (area engineer) face-to-face."



Satisfy the  
Customer





The \$18.3 million Main Post Barracks was turned over to the 36th Engineer Group in September 1997.

John Brent, chief of Benning's Environmental Management Division, concurs. "I had a bit of resentment at first," he confessed. "Here comes the Corps displacing the Environmental Office. But their being here benefits everybody. Now my staff can walk upstairs and talk directly to Harold."

The district's construction folks see the end users daily because of proximity. Halpin, because he's in the DPW's office suite, sees Buck and his staff daily.

"What I am is a liaison, particularly when it comes to the customer's concerns on scope, schedule, budget, new services, and upcoming projects," said Halpin. "I try to understand what's important to them, and make sure that gets communicated to the district team. I try to get ahead of the problem and operate in a preventative mode. A lot of what I do is about communication."

"I tell anybody that I'm not sure how we operated without having a support manager," said Buck. "He takes care of so much stuff that either wasn't getting done, or someone in DPW had to do, or Harold Hartman had to deal with it. And now we have an installation support fellow here who picks up the pieces and runs with them."

### Teamwork

Almost all of the district's work at Fort Benning originates at the installation. The DPW staff does the planning and programming, then the money comes through Corps channels for the district to do the design and construction. Because these two separate organizations have the same mission to support the Army, the ideal is for them to function as one.



The \$29.2 million barracks complex for the 75th Ranger Regiment is just coming out of the ground.

"I think the two groups have already evolved into one team," said Sammy Harris, Benning's Chief of Engineering. "We've cultivated a relationship that allows Harold Hartman and his staff to come to us with their concerns, and we can go freely to them with ours and know they will be met. We can depend on each other and that fosters a good relationship. So the relationship was already established; having an installation project manager enhances it."

"When we look at using an architect-engineer firm versus the Corps, we look not only at cost but at what we get for our money," said Brent. "Can we work with the people? Can we have a short turnaround time? Do they understand our requirements and have the flexibility to handle changes? In the past, working with the Corps on changes has been somewhat difficult."

"But now, I'm seeing the Corps spend more time finding out exactly what we want," Brent continued. "All of them, I feel, have taken extraordinary efforts to find out exactly what we want, because in the long run it benefits everybody. Sometimes the installations aren't good at articulating what they want. In the environmental arena it's particularly difficult because you may not know what's there until you actually get into the job."

### Personal contact

Brent says one of the Corps' strengths is that it is part of the military. "Private firms may have some experience working with military installations, but there's a difference between having experience and having *lived* the experience."

The final measure of success, Hartman said, is meeting corporate goals.

"But another measure of success is personal contact with the customers and getting to the heart of their problems and what it takes to resolve them," he added. "That's not easily quantifiable, but you can tell a happy customer from an unhappy one. If you spend time with them they'll let you know. And you have to be in touch at all levels, because a sergeant may say he's unhappy, but it's not you he's unhappy with. He's unhappy because he's been assigned to the motor pool. By the same token, the colonel may think everything's fine, but down in the motor pool the sergeant is working in a puddle because a drain is clogged. You don't find out these things unless you're in touch with your customers."



# Customer Team

## Coalition of navigation users a vital force in building lock and dam

**Jennifer Wilson**  
Little Rock District

Have you, as a customer, ever been consulted with about the product you are purchasing?

Have you ever been invited to visit the site where the product is produced? Ever been included in a planning session with the contractor and the contract administrator?

Most of us rarely receive this level of customer care. But uncommon customer service is exactly what Little Rock District is striving for in building the Montgomery Point Lock and Dam.

Building the new lock and dam on the lower portion of the McClellan-Kerr Arkansas River Navigation System will solve a chronic low-water problem in the area.

Without the dam, navigation restrictions and heavy dredging were common practice. This slowed or temporarily halted navigation traffic and affected shipping, towing, and port and terminal interests in a two-state region.

When the solution became obvious, so did a large amount of support from the navigation system's customers. The users of the navigation system (shippers,

In fact, coalition members recently returned from briefing Arkansas and Oklahoma's Congressional delegations in Washington, D.C.

"We have such a good relationship with the Corps, and we work so closely with them," Portiss said. "If you had walked into the Congressional briefings, you would have thought Glen or Wally worked for the Corps. They had all the current information and knew all the issues."

Coalition members know what's going on at the project because Little Rock District makes an effort to keep them informed. Shortly after project construction started, the district invited coalition representatives to participate in the partnering session with the contractor, J.A. Jones/Atkinson Joint Venture.

"I know it was out of the ordinary for us to be invited to the partnering

meeting, but if you think about it, that's really the way it should work," Portiss said. "We're able to hear everyone's concerns and expectations, and they can hear ours. We learn where everyone is coming from, and we build a relationship that will hold in the event that something happens."

Those relationships were put to the test when the Montgomery Point Lock and Dam faced temporary work stoppage from January to June 1998 due to a lack of funding. It could have been a time when everyone turned against each other.

But the district took steps to triple their communications efforts with their customers.

"The shutdown came earlier than we expected," Hathaway said. "We truly realized then the importance of keep-

ing them informed. It is to our benefit to coordinate with these folks because they will be most impacted by the construction.

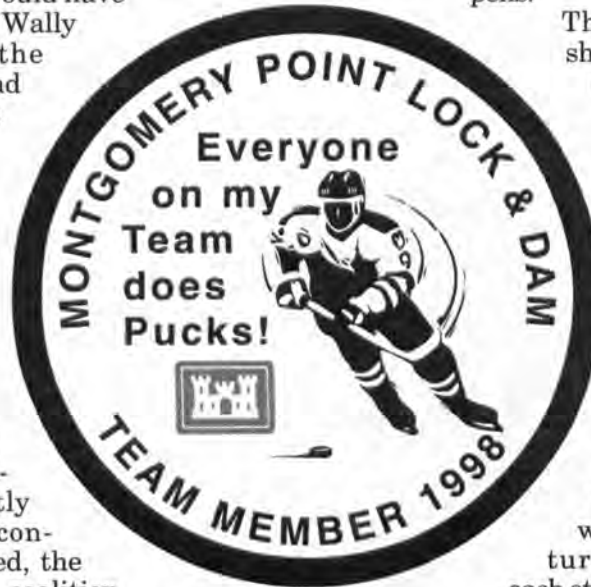
"Because of their organization, we can brief four people who in turn pass information on to hundreds of customers," Hathaway explained.

Since that time, the project's resident engineer and project manager prepare bi-weekly status reports and photos of the work that are forwarded to interested parties in the district, in Southwestern Division, and to the four key coalition members.

"I think it says a lot for our relationship when you realize that the same report we send to our higher headquarters is sent to our customers," Hathaway said. "They know everything that we know."

Coalition representatives also meet quarterly with Hathaway and acting project manager Tom Clement for lunch and a personal briefing. The group also has made site visits to Montgomery Point to see the work in progress.

"Our working relationship is not perfect yet, but we're getting there," Portiss said. "We have made unbelievable strides, and we have good working relationships with Little Rock and Tulsa districts and the Southwestern Division."



*Satisfy the Customer*

towing industry, and port or terminal representatives) formed the Coalition for Montgomery Point Lock and Dam.

"We recognized them as a serious force in the Montgomery Point project when they brought two busloads of supporters from Oklahoma just to attend a public meeting in Pine Bluff during the feasibility phase of the project," said Randy Hathaway, chief of Project Management for the district.

The coalition started with two leaders, Glen Cheatham of Oklahoma and Paul Revis of Arkansas. In the 10 years since the loose-knit organization of customers formed, their interest in and support of the project has grown.

"We've been involved in the project since the beginning," Cheatham said. "It's important to all of us because it improves the reliability of the navigation system. We depend on the system to make our living. Our states depend on the system to cheaply and easily transport needed products. We've taken it upon ourselves to keep this project in front of the lawmakers who ultimately fund it."

Keeping the project in front of the decision-makers, educating the local officials, and keeping their coalition members informed is no small task. Two additional leaders, Bob Portiss of Oklahoma and Wally Gieringer of Arkansas, were added to help share the work.

## Boxes give ducks safe nesting

**By Lira Frye**  
New Orleans District

In the past century, farming practices, tree harvesting, and natural predators have significantly decreased the number of wood ducks in the Atchafalaya Basin. But New Orleans District park rangers and a Louisiana State University (LSU) group are working together to change that.

Rangers Robert LaFleur and Jack Bohannon, along with Brett Hunter, president of the LSU Student Chapter of the Wildlife Society and its members, are placing wood duck boxes throughout the Indian Bayou and Sherburne Wildlife Management areas of the Atchafalaya Basin. Bohannon said the boxes provide a safe place for hens to nest and, as a result, will increase the wood duck population.

If man-made boxes aren't available, wood duck hens nest in tree cavities, which are easy access for predators. "The ducks have a lot to contend with when they're nesting," Bohannon said. "Snakes, raccoons, and man find the ducks and their eggs an easy meal."

The boxes, made of red cedar or cypress, are attached to a pipe and placed near water. Each pipe is equipped with a predator guard, a piece of flashing (sheet metal) that surrounds the pipe and keeps predators out. The boxes are labeled with "USACE Wood Duck Nesting Program."



Jack Bohannon, left, and Brett Hunter set up a wood duck box. (Photo courtesy of New Orleans District)

The pipe (donated by Apache Corporation and prepared at no cost by Source Environmental Services), and the flashing (donated by Delta Waterfowl and Research Station) make the boxes effective. Without them, the boxes would be attached to trees, which provides no protection from predators.

One box can be used three times

during the nesting season. A wood duck hen, which migrates up to 500 miles to nest, lays about 12 eggs, one egg per day. Within 24 hours of the eggs hatching, she leaves the box and takes the chicks with her.

The rangers and volunteers from LSU's Student Wildlife Society will clean the boxes and provide nesting material.

They will check boxes each month during mating season, March through August, and make note of any eggs or ducks they find in the boxes.

Hunter will use the information gathered to complete his master's thesis. He has test sites such as this set up throughout the U.S.

"The project is helping him, but also benefiting us," Bohannon said. "Doing something as small as this gives so much to the area and the future of waterfowl. We spend a few man-hours and get back a big return."

The group has placed 180 boxes. Most (120) are in the 16,000-acre Indian Bayou area. The rest are in the Sherburne Wildlife Management Area.

In four to five years, Bohannon expects to see the basin's wood duck numbers increase significantly.

"Just the aesthetics of having wild ducks in the basin gives a different feel to the land," he said. "Some people come just to watch the birds, some to hunt. Hopefully, this project will please everyone."



# Training program gives boat crews a hand

Article by Michael Logue  
Photo by Alfred Dulaney  
Vicksburg District

For a century, careers on U.S. Army Corps of Engineers' towboats followed the tradition on the Mississippi and other rivers. Deckhands, cooks, and strikers (engine room technicians) retired as deckhands, cooks, and strikers with little chance of taking the wheel of their vessel they manned.

Until now.

With an unusually high number of retirements, Vicksburg District needed a lot of engineers, pilots and other highly-skilled positions. About the same time, the Corps' leadership was hearing from a growing number of deckhands, cooks, strikers, and others wanting to qualify for top positions.

The answer is an innovative training program that is becoming the norm for Corps vessels on the Mississippi.

"We had a simple problem," said Louis Logue, Chief of Operations for Mississippi Valley Division. "Few people on the street were interested in the jobs, and our folks had no way of getting the training to selected."

Logue, then chief of the district's River Operations Group, began an informal program of on-the-job-training (OJT), mentoring, and specialized training to include the general equivalency degree. Equipment operators, boat operators, welders, foremen, and others on the river vessels have had training to develop higher-graded skills.

Jeffrey Jones, one of the program's graduates, can now compete for higher-paying supervisory technical positions. Jones began as a food service worker



An innovative training program in the Vicksburg District gives deckhands, cooks, strikers and other crew the opportunity to learn skills for more specialized positions like engineers and pilots.

on the dredge *Jadwin*, got promoted to cook, then began cross-training in the engine room during lay-up season.

"I'm a diesel-electric striker now, and I just passed the U.S. Coast Guard engineer's test," Jones said. "I hold a license as an assistant engineer."

Perry Huskey, chief engineer of the *Jadwin*, said the training encompasses all areas. "It includes everything from a green deckhand learning to throw a line or tie knots to those training to be first class pilots," he said.

Jim Jeffords, the district's Chief of Navigation, said about 15 of the *Jadwin*'s 51-man crew have been involved in some type of recent training.

The *Jadwin* program became the model for all the boats in the Mississippi Valley Division.

"What we want to do is to create a pool of employees who are qualified for various positions by offering training on-site," Jeffords said. "In 1993, we lost our captain, first mate, chief engineer and others all at the same time,"

"We extend training opportunities to all employees," Huskey said. River workers are also provided opportunities to work on different jobs to gain skills, and are encouraged to take courses in their off-duty hours.

Jones said he spent his spare time on the training program, which took

about six months to complete. He got hands-on experience and had a licensed engineer present to answer questions.

Supervisors are assigned to interested employees to guide them and monitor their progress.

"Training is okay, and OJT is okay," Logue said. "But for someone to make it all the way, they need someone who can guide them. That person becomes their mentor-supervisor."

Every person progresses at his own pace, says Dennis Norris, the district's current Chief of River Operations. "Everything on the river takes time, especially in the specialized areas," Norris said. "The program offers maximum flexibility to accommodate different skill levels. Some more specialized areas may take longer. It usually takes about three years to get in enough time, according to regulations set by the U. S. Coast Guard."

The program already has graduates. "We have two men who recently got their engineer's license after starting out as deck hands," Jeffords said. Two electricians are taking the test for engineer's license, and a motor vehicle operator is now an equipment operator in the pilothouse, working on his mate's license.

The success of the program has been 100 percent, Huskey said. "Everyone wants to improve, and most will improve when given the opportunity."

"It takes money to invest in people like this," Logue said. "Obviously, you need replacements while others are away in training. But our leadership is committed to doing this for our folks and to insure a pool of good leaders for our river program."

## Pittsburgh tech engineers childhood dream

By Janet Heyl  
Pittsburgh District

When Bob Reddinger decided he wanted to become a locomotive engineer, his seventh-grade guidance counselor derailed his plans, saying that riding the rails offered bleak employment opportunities. So Reddinger attended forestry school instead.

But 30 years later, he proved his guidance counselor wrong. In 1997, Reddinger became a certified locomotive engineer. During the week, he is a civil engineering technician with Pittsburgh District's

Operations and Readiness Division. But he sports overalls and a railroad hat on his weekend job -- driving a train for the Kiski Junction Railroad.

Sitting in the cab of a 1943 American Locomotive Company diesel, Reddinger steers the excursion train on a 90-minute scenic tour from Schenley to Bagdad, Penn. The train has three cars, two cabooses, and a flat car with seating.

According to Reddinger, this year he finally feels confident behind the engine.

"When I first started, I had sweaty palms," he said. "A train doesn't stop on a dime. It actually takes about 100 feet for the train to start slowing down."

And unlike modern trains, where computers alert the engineer to problems, Reddinger must rely on a sixth sense. "I have to look for the source of a funny sound in the engine and try to find out what's wrong."

Even though the train only reaches six to 10 mph, Reddinger said a degree of anticipation for something to go awry still exists.

"Our route has three road crossings that have signs but no flashing gates," he said. "A lot of people think they can beat the train, or they just don't want to wait. A vehicle on the crossing is my biggest concern. Last summer, a bear was in the middle of the tracks. I stopped the train so people could take photos, but he took off."

He explained the excursion route is geared towards family fun.

"People can bring a picnic lunch and eat on the train, and we celebrate birthday parties on the train,"

he said. "We even have a Halloween train, where an old building along the tracks is decorated for Halloween."

Reddinger said he relishes his job as a locomotive engineer. He says his love affair with trains dates back to his early childhood. When he was two years old, his grandfather gave him his first Lionel train set.

"Since then, I've always played with little trains and dreamed about working on a railroad," Reddinger said. "When my car would be stopped at a railroad crossing, I'd lean over and tell my wife that I should be up there running that train."

Reddinger's locomotive career became sidetracked until 1996. He literally began his career from the ground up. In fact, Reddinger has probably spent as much time on the tracks as the trains. He said that when the Kiski Junction Railroad purchased its rail tracks from Conrail, they needed a complete overhaul. In 1996, Reddinger and a handful of train enthusiasts began replacing the railroad ties and track.

"I would go down to the tracks in the evenings after work and on weekends," he said. "The railroad also hauls scrap steel for Allegheny Teledyne and if I had time, I'd do that, too."

Reddinger, who receives no pay for operating the Kiski Junction train, said he has received something greater -- a sense of personal satisfaction.

"I love to do this," he said. "If I didn't have my job here in Pittsburgh District, I'd try to find work on a railroad. But even then, I'd still do the free work."



After 30 years, Bob Reddinger lives out his childhood dream to be a locomotive engineer. (Photo courtesy of Pittsburgh District)



# Europe teaches time-saving system

**Article and Photos  
By Marnah Woken  
Europe District**

The Theater Construction Management System (TCMS) is a computerized planning, design, management, and reporting system used by Army engineers for construction activities. Originally developed in 1990 by the Construction Engineering Research Laboratory (CERL), TCMS automates engineering activities previously performed manually, making the design and construction process much easier.

"TCMS offers a vast array of designs for projects as simple as guard towers to something as complex as full-blown base camps," said Scott Lowdermilk, TCMS Coordinator for Europe District. "One of the biggest benefits to TCMS is that it's much easier to use than its predecessor."

"I'm a battalion construction officer, so it's important for me to know how construction is going and if it's being done correctly," said 1st Lt. John Morrow of the 94th Engineer Headquarters and Support Company in Vilseck, Germany. Morrow recently attended TCMS training. "I'll be able to use this program for project planning and management. For example, if we want to build a warehouse with certain dimensions, interior electricity, and a concrete pad, I can go to this program and pull up what I want. I can add or subtract details and come up with a pretty good estimate of how long the project will take, what materials and labor are needed, and how much it's going to cost."

"It's a lot better than the old system which involved working with a lot of

old manuals," Morrow added. "I also like the fact that you can use the TCMS database with Microsoft Project software to get a visual picture of what you want."

Before TCMS, military personnel used design manuals from the Army Facilities Components System, along with several other large technical manuals.

"TCMS eliminates the time previously spent performing design functions manually, calculating labor and cost estimates, and other functions," Lowdermilk said. "Now the same soldier just needs a computer with a CD-ROM to have all of the same information at his or her fingertips."

Europe District provides TCMS training for active duty, reserve, and civilian personnel throughout U.S. Army, Europe, and the TCMS program is currently being used by engineers in the Bosnia theater of operations.

"During the past two years, we've provided training to more than 90 active duty and reserve Army engineers," said Lowdermilk. "Classes are generally two to three days in length, depending on student needs, and centrally funded by the Department of the Army so there's no cost for the training or the software."

The training package includes the TCMS program as well as two commercial software packages, AutoCAD LT and Microsoft Project.

"AutoCAD LT is needed to view and manipulate designs, and Microsoft Project is an added bonus that allows the user to manage a project from cradle to grave," Lowdermilk said.

After initial development, CERL transitioned TCMS to the Corps'



**Spc. Darren Rouse of the 130th Engineer Brigade and 2nd Lt. Amanda Pomnerenck of Alpha Company, 94th Engineer Combat Battalion, attend TCMS training through Europe District.**

Huntsville Engineering and Support Center for management. The Huntsville Center further developed the program in 1993, and continues to maintain and distribute it, and provide hands-on training.

Combining state-of-the-art computer hardware and software, classes provide information on project planning, design, management, reporting,

and communication.

"The classes familiarize students with the TCMS system so they can learn to develop and manage projects," said Sandra Mayes, TCMS Support Personnel from the Huntsville Center.

"I'm a construction platoon leader and this class will help me with planning and managing our construction projects," said 2nd Lt. Amanda Pomnerenck of A Company, 94th Engineer Combat Battalion in Vilseck. "This is a good, straight-forward program with plans for a lot of different projects. I can use the TCMS program for project plans to get a general idea of the project cost and how many people I'll need. This gives me a good base for planning."

"This is becoming the industry standard," said Spc. Darren Rouse, Headquarters Company, 130th Engineer Brigade in Hanau. He is a surveyor in the construction management section, and recently completed TCMS training. "I hope everyone who's involved with construction will have a chance to use it. It really opens up your eyes to what's going on outside of just one particular task on a project."

"The students seem very pleased with the program and they all seem to be impressed with the product," said Fred Steinman, TCMS Support Personnel from the Huntsville Center. "The class gives them a basic knowledge of what the program can do. They can use the basic information in the program as a starting point, then develop a project that suits their particular needs."

TCMS training has been conducted in Germany, Korea, Japan, Hawaii, and Panama, according to Steinman. "Anywhere you find the Corps of Engineers in the world, we've done the initial training," he said.



**1st Lt. John Morrow of the 94th Engineer Headquarters and Support Company in Vilseck, Germany, works with the Corps' Theater Construction Management System. Europe District provides training on the computer software program, designed to simplify engineering activities.**



# Around the Corps

## Hammer award

Little Rock District received its sixth Hammer Award on March 25 for a partnership with Arkhola Sand and Gravel Co. of Fort Smith, Ark.

High river flows are common on the McClellan-Kerr River system. When flows decrease, the sediment begins to settle on the bottom of the navigation channel. To maintain the nine-foot channel, the sediment must be dredged out of the channel.

It takes about 20 days from when the flows begin dropping until they are back to normal, so the dredge must mobilize quickly. The district has a contract with a dredge company to handle large areas but, in the past, Corps crews from Pine Bluff and Russellville marine terminals have helped with the smaller areas.

"We spend about 50 percent of our time clam-dredging," said Mike Bagley, captain of the motor vessel *Shorty Baird*. Clam-dredging scoops sediment from the navigation channel, which is less efficient than other types of dredging.

The Corps discovered that Arkhola could use the dredged material, and could respond in a couple of hours, allowing the district to maintain the channel without tying up maintenance crews.

Arkhola and the district signed a formal Memorandum of Agreement in 1997. Now, when Corps hydrographic surveyors find the navigation channel is silting up, they call Arkhola to dredge it. Each time Arkhola dredges navigation channel saves the government \$50,000. The contract dredge still handles larger areas with sediment deposits that Arkhola cannot use.

## Journalism winners

The Corps had six winners in the 1998 Keith L. Ware Journalism Competition. The competition recognizes the best journalists throughout the Army.

The *Transatlantic News* of the Transatlantic Programs Center won first place in the Army-Funded Newspaper, Small, category.

Marie Heinz of Buffalo District won first place in the Illustrative Art category.

Clancy Wahl of Transatlantic Programs Center won first place in the Special Contributor Writing category.

Lira Frye of New Orleans District won second place in the Civilian Journalist of the Year category, and Honorable Mention in the Sports category.

*Engineer Update* won an Honorable Mention in the Army-Funded Newspaper, Large category.

The *Transatlantic News* and Marie Heinz's entry will go forward to compete in the Thomas Jefferson Competition at the Department of Defense level.

## AAFES partnership

Southwestern Division (SWD) and the Army and Air Force Exchange Service (AAFES) are enhancing communications and exploring mutual business opportunities during a six-month test which began March 1.

The initiative places Lee Conley of SWD's Programs Management Directorate in AAFES Construction and Facility Directorate. While with AAFES, Conley will advise AAFES in understanding the Corps' capabilities.

"This provides seamless access to Corps resources for AAFES and opens the 'One Door to the Corps' a little wider," said Brig. Gen. Edwin Arnold, Jr., SWD's Commander.

## Design award

Savannah District won the 1999 Air Mobility Command (AMC) Design Award in the Concept category for a dormitory design at Pope Air Force Base, N.C. The district will now compete in the Air Force-wide

design competition. Winners will be announced in May.

"Pope has limited space for new construction," said Douglas Plachy, senior project manager. "Because the dorm is near the runway, we had a lot of design constraints due to runway clear zones and other limitations. But we were able to lay in the building in such a way that we not only met the site constraints, but also took advantage of each one so the building looks like it belongs there."

The design was a collaborative effort involving an in-house design team which prepared the original design; LS3P Associates LTD, an architect-engineer firm and their subcontractors; and AMC's Design Center.

Because it is near the runway, the buildings were designed with special windows and insulated doors. The modular design will allow length and height to be added without redesigning the complex.

## Retiree council

Vicksburg District recently established its first retiree council to involve and keep contact with its retirees. The council held its first meeting recently at district headquarters.

"I believe this council will help bring our retirees closer to our district work force," said Col. Robert Crear, District Engineer. "Former team members have so much experience and so much to contribute that we would hate to overlook such a valuable resource."

Currently, 303 Corps retirees live in Vicksburg, Miss., with another 407 scattered in neighboring states. The council will begin by updating retiree lists, seeking volunteers, and developing future activities. There will also be a special retiree page in the district's quarterly newsletter.

## Corps/SSU partnership

Savannah District and Savannah State University (SSU) have a partnering agreement that commits them to work together to enhance opportunities for SSU students throughout the Corps.

Savannah District Commander Col. Joseph Schmitt and SSU President Dr. Carlton Brown signed the agreement on Feb. 8. It formalizes an ongoing rela-

tionship to help SSU students prepare for careers in engineering and the technical sciences.

Under the agreement, the Corps will provide summer and part-time employment, internships, and work experience for the students. Besides maintaining close contact with the SSU faculty and students, the Corps will provide visiting lecturers, participate in developing curricula, serve on engineering advisory committees, make Corps facilities available for classroom instruction, and perform other functions that will help build an effective partnership.

SSU's contribution includes providing a liaison with the Corps, informing SSU students about Corps opportunities, and conducting short-term courses for district engineers and technicians.

## Environmental award

The cleanup day program at Sardis Lake in Vicksburg District took top honors in the Government Agency category of the 1998 Keep America Beautiful competition. Members of the Sardis Lake Field Office received the award in Washington, D.C., during Keep America Beautiful's 45th National Awards Ceremony.

During the 30-plus years of the community-wide effort, more than 3,600 volunteers have spent 19,000 man-hours picking up tons of garbage from the waters, land, and roads at Sardis Lake.

## Senate staff member

Susan Fry of Planning Division in Sacramento District is a staff member on the Senate Appropriations, Energy, and Water Sub-Committee for the rest of the fiscal year.

Sen. Harry Reid of Nevada requested Fry because he was impressed with her work on Reno area projects.

Fry will spend the next seven months performing budget analysis, reviewing appropriations, and working on developing the biennial Water Resources Development Act.

"The work so far is pretty interesting," Fry said. "I'm mainly working on appropriations for the Bureau of Reclamation and the Department of Energy. I'll be putting in some long hours here, too. I got done last night around seven."

## WES aids search for historic graves

**Jennifer King**  
**Waterways Experiment Station**

In 1878, the Chief Joseph band of Nez Perce Indians buried their dead at Fort Leavenworth, Kan., where they were being held as prisoners of war. The site of the burial ground has long been a mystery, but that may soon change.

Robert Dunn and Dr. Fred Briuer, archaeologists at the Engineer Waterways Experiment Station (WES), will search for Nez Perce gravesites at Fort Leavenworth using a variety of geophysical prospecting technologies. The search for the gravesites is phase two of the project and is scheduled to begin this month.

Phase one, which included substantial archival research, has been completed.

The search for the burial ground is a result of a Conservation Assistance Program request by Fort Leavenworth in June 1998. The Nez Perce in Lewiston, Idaho, are conducting a peace ceremony at Fort Leavenworth this year and hope that locating the burial site will help complete part of their history and bring some closure to the tribe.

The Nez Perce, led by the charismatic Chief Joseph, were attempting to flee the U.S. in 1877. They

were captured by soldiers led by Col. Nelson Miles just 40 miles south of the Canadian border after a 1,700 mile pursuit. During the surrender, Joseph declared, "From where the sun now stands, I will fight no more forever."

The Nez Perce prisoners of war were incarcerated at Fort Leavenworth from Nov. 27, 1877, until July 21, 1878. Of the 431 Nez Perce sent to the fort, 21 are believed to have died during their confinement and were buried in a small graveyard near the old post racetrack in the Missouri River bottoms.

The burial place was once marked by a fence built of split saplings, but the location was lost during the years. Dunn's extensive archival research at the National Archives helped pinpoint the location of the cemetery.

Briuer and Dunn will work with Fort Leavenworth staffers Matt Nowak and Steve Allie to locate the lost Nez Perce graves. If the graves are located, repatriation of the remains according to the wishes of the Nez Perce tribe will be accomplished.

The WES team, including geophysicist Dr. Dwain Butler, will use a variety of remote sensing technologies, possibly including Ground Penetrating Radar.



# USAF honors Tornado 'beddown' work

By Joan Mier  
Albuquerque District

For the third time in seven years, the Air Force has recognized Albuquerque District for its work. On Jan. 14, the Air Combat Command (ACC) named the district its Design Agent of the Year. The district won for its efforts in the second phase of the German air force's \$90 million Tornado "beddown" program at Holloman Air Force Base, N.M., and for the Theatre Air Command and Control Simulation Facility (TACCSF) at Kirtland Air Force Base, N.M.

The district will now compete at the Air Force-wide level; winners will be announced in May.

Albuquerque District was the Air Force's Design Agent of the Year in 1997, and received both Design Agent of the Year and Construction Agent of the Year honors in 1992.

Factors leading to this year's honor include meeting the German air force and U.S. Air Force design milestones despite a six-month delay in completing the Environmental Impact Statement (EIS) and the signing of the Record of Decision, according to Brad Green, the district's project manager for Holloman.

## Scope and changes

"The scope of the program changed constantly due to functional requirement changes during the design process," said Green. "The German air force is trying to program for something they have never done before and, as circumstances evolve, changes take place. We accommodate them and that service is appreciated by both the German and U.S. Air Force."

In spite of the program changes, Albuquerque District managed to minimize the time lost and still design all 20 projects for under the total amount programmed.

The district pulled off similar feats for other Air Force projects, awarding the design/build contract for TACCSF ahead of schedule after a five-month delay caused by the line item veto, which Congress eventually decided to override, according to Kent Heyne, the district's project manager for Kirtland.

"That delay put the entire project in jeopardy, because it was a 1998 Congressional insert project, which meant it had to be awarded in that fiscal year," Heyne said. "It looked like we wouldn't be able to meet the deadline, but we did, thanks to a real team effort and the 'can-do' attitude of everyone working on the project."

## Innovative packaging

The district also met design award milestones for the Learning Center at Holloman, which had been deleted from the program and then reinserted three months later.

Innovative project packaging of the German air force projects ensured con-



The \$2.5 million, 17,800-square-foot jet engine workshop will be used to disassemble and rebuild aircraft engines. (Graphic courtesy of Albuquerque District)



Holloman Air Force Base is a training site for Tornado fighters. The Tornado flies high-speed missions at low levels. When the German air force's program is complete, 42 Tornados will be stationed at Holloman. (Photo courtesy of Albuquerque District)

struction would be accomplished without interference between projects and enhanced the bidding climate, which came in at \$9 million less than the government estimate. For example, similar projects that were geographically close were grouped into one contract, which saved money. Twenty projects were combined into only nine contracts.

## Design agent

The German air force selected Holloman as an additional training site for its Tornado aircraft, and the construction will facilitate the maintenance and troubleshooting of the aircraft and related weapons systems. When the second phase is completed 2000, 30 more Tornado aircraft will be stationed there, bringing the total to 42.

"When the district was named the Air Force's Design Agent in 1997, the success of the German air force pro-

gram was singled out as a major factor in that decision," Green said.

"We do good work and people here take a lot of personal pride in what they do and work well together," said Kim Zahm, chief of Design Branch. "They look for complex assignments instead of trying to avoid them."

## Simulations

Finding them has *not* been a problem. TACCSF is a prime example. It will be one of the first Air Force facilities to act as a hub for simulating joint forces war. It's communication requirements will be the largest of any facility at Kirtland. Using computerized data links, the 80,000 square-foot facility will make it possible for the Air Force to connect anywhere in the world and simulate battle conditions.

"For example, through visual simulation, it will be possible for an Air Force pilot anywhere in this country to link up to a Navy pilot in another

country and feel like he's flying right there next to him," Heyne said.

## Laser research

Construction is currently underway on another high-tech facility at Kirtland, the Advanced Laser Research Laboratory. The \$8.5 million facility will be used by Phillips Laboratory to develop laser technology for the Air Force's airborne laser program.

"The high degree of technology necessary to design and build the facility is roughly equivalent to that required to build a hospital," said Heyne.

Albuquerque District also used the "One Door to the Corps" concept by partnering with Sacramento and Los Angeles districts for work at Indian Springs Air Force Auxiliary Air Field in Nevada. The design work was "brokered" to Albuquerque after Sacramento completed about 35 percent of it. Albuquerque completed the design and advertised the project; Sacramento District provided technical review and support; and Los Angeles District furnished project management, opened bids, and will award and administer the contract. It was the first time in South Pacific Division history that three districts came together on a single project.

## UAVs

Indian Springs encompassed \$15.6 million in design work to support the "beddown" of 44 Medium Altitude Endurance Unmanned Aerial Vehicles (UAV). UAV are robot scout aircraft. ACC is using Indian Springs, which is serviced by Nellis Air Force Base, to locate the aircraft.

"Our people accept the premise that our future depends on what we do today," Zahm said. "Our people never want to put out anything that doesn't exemplify excellence, and the Air Force expects nothing less."